

Azolla) in water ten feet deep. The fronds are arranged in rosettes, each having roots of its own. The young ones are central, of the usual crosier shape and the spongy stipes bear a few hyaline, cup-shaped scales.

Cheilanthes microphylla I have not found in a second locality, although I have explored 200 miles of the eastern coast of Florida pretty thoroughly. In October I revisited its station and found it much better developed than last year, when the weather was extremely dry. I secured all the fruiting specimens and will distribute them. I decline to make selections of less than 100 specimens, except in the case of these twelve ferns, which are put up in uniform sets, with printed labels, and sold for \$1.20. For packing and postage 30 cents additional is charged on any number of sets sent to one address.—

A. H. CURTISS, *Jacksonville, Fla.*

FERN ETCHINGS by John Williamson, author of FERNS OF KENTUCKY. Louisville: John P. Morton & Co. Ed. 1.—A little more than a year ago appeared the modest "Ferns of Kentucky" illustrated by lithographic plates transferred from etchings by Mr. Williamson, the author of the work. Many of these plates were quite excellent and still more showed that had the original copper plates been used the results would have been much more satisfactory, as the delicacy of the etchings were lost by the process of transferring.

Mr. Williamson himself seems to have appreciated this fact, for in his new work we have the etchings themselves, printed in most cases in a very beautiful manner.

The volume, which is about 8x10 inches, contains plates of sixty-eight Ferns, natives of the United States, which is about one-half of the species known to inhabit this area. The description of each species will be found opposite the plate and has been taken from the works of Prof. Gray and Prof. Eaton. The very best of the plates of the "Ferns of Kentucky" are used in this volume, but these are but few. By far the larger portion are entirely new, while the others are the same species as in the former book from vastly improved plates. It would be impossible to select any particular plates to mention as best, for all are so perfect. The smaller species of ferns are of course best represented, as the entire plant can be brought within the compass of the page. The larger ferns are excellent but it is to be regretted that they should not have been etched on larger coppers, as the excellence of the portions of them which are given creates a desire for the whole.

Plates 1, 5, 9, 15, 17, 36 and 50, representing the smaller ferns, and plates 10, 13, 31, 35, 40 and 52, representing the larger growing species, seem to possess superior excellence. In fact many of the plates of this book would be eagerly seized upon by the virtuoso if met with among a collection of etchings, as a great prize. Mr. Williamson is a man who does this work, not because he desires to emulate the work of eminent botanists, but because the ability to do it is in him and he can but allow it to manifest itself. Mr. Williamson's occupation and circumstances are such that he does not possess the leisure time which is often at the command of the amateur to spend upon the work he so much enjoys, making the result so much the more to be wondered at.

The volume before us is dedicated to a mutual friend of the author and the present writer, and it is with unfeigned pleasure that the latter commends the author's taste in selecting one to honor who, like himself, works against surroundings for the love of the branch of science in which he labors.

As the number of species represented is about one half of the known ferns of the country, and a second volume would include all, it makes the price of the volume, which is \$7.50, very much less in proportion than is charged for the works usually met with occupying the same field, thus bringing it within the limit of many more persons than is generally the case.

It is to be hoped that the sales of this volume will be such as to warrant the completion of the work, and if such should be the case the public, and pteridologists particularly, would have a rare volume if Mr. Williamson succeeded in carrying it as far beyond the present one as this is superior to his first book, "Ferns of Kentucky," which, judging from his work thus far, he may do.—JOHN ROBINSON.

TENSION IN AN OAK.—Near New Birmingham, Ohio, is a good sized White Oak which furnishes so good an illustration of the tension of tissues that it is worth while noting. The tree had been cut into on one side, just fairly into the sap wood, and then left. Being exposed to a heavy wind it was so bent away from the cut side that the slab split up the tree some ten feet, its cut end slipping entirely out of its former resting place. The connection above was perfectly retained and hence the slab continued to live, projected at a small angle from the tree. The lower end, after slipping out from its support, has so elongated that it is now nearly two inches too long to occupy its former position. There has also been a healing up and barking over